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Organizational Analysis of the TIDES Project and the STAR-TIDES Network Using the 7-S Framework

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14. ABSTRACT

This Defense Technology Paper provides the results of an organizational analysis conducted in 2011-2012 of STAR-TIDES, a special project of the National Defense University???s (NDU) Center for Technology and National Security Policy (CTNSP). STAR-TIDES (Sharing to Accelerate Research Transformative Innovation for Development and Emergency Support) is an open network organization with members around the world who share an interest in finding new, and more effective and sustainable solutions for populations affected by disasters, conflict, and other life-threatening scenarios. A special focus of the organization is to bring useful information in these areas to the attention of U.S. Department of Defense (DOD) policy makers so as to enhance national security efforts. Our analysis sought to develop a thorough understanding of the STAR-TIDES organization, and provide practical recommendations for strengthening its performance and viability. In doing this, we applied the McKinsey ???7-S Framework??? which identifies seven key areas (Strategy, Structure, Systems, Staffing, Skills, Style, Shared Values) that are essential for all organizations, and that must be aligned or mutually reinforcing in order for the organization to succeed.1 The paper provides some background and history on the STAR-TIDES organization, describes our methodology, and presents findings for each of the 7-S factors. While our results are somewhat specific to STAR-TIDES, such networked organizations are becoming more common in a world that is increasingly interconnected. Thus, this report should be relevant and valuable to many organizations that share features of an open network.

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Linda M. Wells has been involved with the TIDES project and the STAR-TIDES network from their inception. She has particularly been engaged with the project's field demonstrations and displays, with various types of transportable infrastructures, and with support to the TIDES staff.

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Executive Summary

This Defense Technology Paper provides the results of an organizational analysis conducted in 2011-2012 of STAR-TIDES, a special project of the National Defense University's (NDU) Center for Technology and National Security Policy (CTNSP). STAR-TIDES (Sharing to Accelerate Research – Transformative Innovation for Development and Emergency Support) is an open network organization with members around the world who share an interest in finding new, and more effective and sustainable solutions for populations affected by disasters, conflict, and other life-threatening scenarios. A special focus of the organization is to bring useful information in these areas to the attention of U.S. Department of Defense (DOD) policy makers so as to enhance national security efforts. Our analysis sought to develop a thorough understanding of the STAR-TIDES organization, and provide practical recommendations for strengthening its performance and viability. In doing this, we applied the McKinsey "7-S Framework" which identifies seven key areas (Strategy, Structure, Systems, Staffing, Skills, Style, Shared Values) that are essential for all organizations, and that must be aligned or mutually reinforcing in order for the organization to succeed.[1] The paper provides some background and history on the STAR-TIDES organization, describes our methodology, and presents findings for each of the 7-S factors. While our results are somewhat specific to STAR-TIDES, such networked organizations are becoming more common in a world that is increasingly interconnected. Thus, this report should be relevant and valuable to many organizations that share features of an open network.

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[1] The 7-S Model is sometimes called the McKinsey 7-S Framework, because it was developed by Robert Waterman and Tom Peters while working for the consulting firm McKinsey and Company. For more on the 7-S model see Robert H. Waterman, Thomas J. Peters, and Julien R. Phillips, "Structure is not Organization," *Business Horizons* (June 1980), 14-26.

I. Introduction

In his 2005 book *The World is Flat*, Thomas L. Friedman argues that traditional historical and geographic boundaries are breaking down in a world that is increasingly networked by technology, commerce, transportation, and digital communications.[2] In this new, more interconnected and shifting world, old borders are becoming less relevant as people, goods, services, and communications move easily and quickly around the globe. The same trends can be seen within organizations, which are increasingly formed by individuals and groups sharing common interests and goals, but not tied to each other by traditional authorities, financial relationships, or geographic location. Membership in many of these new organizations tends to change over time as environments shift, interests adjust, and participants come and go. This evolving, more open organizational structure can be described as a porous network, one in which the boundaries are highly permeable across functional interest areas within the organization, as well as between the organization and the external environment. The structure often is also one of networked nodes that can span large geographical distances.[3]

Such a networked organization was established in 2007 at the National Defense University (NDU) in Washington, DC. Known at first as *STAR-TIDES* or sometimes just colloquially as "TIDES," the initial purpose of the group was to identify low-cost, sustainable solutions for supporting distressed populations damaged by disasters, war, or poverty, and to share this knowledge openly with anyone, including military, government, non-government, and civilian agencies.

At the outset, the TIDES acronym stood for Transportable Infrastructures for Development and Emergency Support, and was very focused on tangible products. The TIDES project was conceived as being part of a larger umbrella group of networked efforts known as *STAR*, for Sustainable Technologies, Accelerated Research. The idea was that this eventually might be expanded to include hypothetical projects such as STAR-MED, focused on medical solutions to health problems of distressed populations, or STAR-COMMS, focusing on communications problems. As it happened, no subsets other than STAR-TIDES were actually started.

Over time, the structure and goals of the organization have shifted somewhat, and the acronyms have also been redefined. Also, an important legal review was conducted in 2010, which clarified that TIDES is a Department of Defense (DOD)-funded, U.S. Government research program, while STAR-TIDES refers to the international knowledge-sharing network.[4] Today, TIDES stands for Transformative Innovation for Development and Emergency Support, and refers primarily to the core group of staff and activities located at NDU's Center for Technology and National Security Policy (CTNSP). STAR now stands for Sharing to Accelerate Research, and the STAR-TIDES moniker is used to refer to the broad global network to which CTNSP's TIDES project belongs and seeks to support.

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[2] Thomas L. Friedman, *The World is Flat: A Brief History of the 21st Century* (New York: Farrar, Straus and Giroux, 2005).

[3] Larry Hirschhorn and Thomas Gilmore, "The New Boundaries of the "Boundaryless" Company," *Harvard Business Review* (May-June 1992), 104-115.

[4] The review was conducted by the DOD General Counsel, in conjunction with the NDU General Counsel. As a DOD project, TIDES must comply with U.S. Government procedures. However, because no endorsements are offered, nor funding commitments made, the STAR-TIDES network can share knowledge with anyone.

This report describes an analysis conducted in 2011-2012 of the STAR-TIDES organization, including both the TIDES project at NDU, and the global STAR-TIDES network. The study's goal was to identify strengths and weaknesses, and provide recommendations for improving the overall effectiveness of the TIDES project and the STAR-TIDES network organization.[5] Due to the interconnected nature of the activities, and the fact that the terms TIDES and STAR-TIDES often were used interchangeably during the project's development, some of the respondents and historical documents are not clear as to whether they are referring to the core project or the broad network. In general, TIDES now is used to refer to most project management functions and staff assignments. The term TIDES/STAR-TIDES is used when both core and network are involved, but interview quotes and references have not been re-written, so in places the terms TIDES and STAR-TIDES may refer to either the core or the network.

At its founding in 2007, the TIDES project received some modest funding from the U.S. DOD, but was considered overall as a non-DOD entity since a key goal was to build links to non-military participants in missions like humanitarian assistance/disaster relief (HA/DR). Since 2007, the TIDES organization has grown and shifted focus somewhat, putting greater emphasis on information sharing and building cross-agency cooperation and understanding, versus the sustainable infrastructures that were the initial center of attention.[6]

A preliminary organizational analysis of the project was conducted in 2009, applying the "7-S" framework, which stipulates that all successful organizations must pay attention to seven key areas: *Strategy*, *Structure*, *Systems*, *Staffing*, *Skills, Style, and Shared Values*.[7] The 2009 analysis, which relied upon TIDES documents as well as observational data, provided some useful recommendations.[8] Since that time, TIDES has continued to grow and change. The present study was undertaken to update the earlier work, analyzing the TIDES project and the broader STAR-TIDES network in the time period of 2011-2012. This analysis will also be guided by the 7-S framework, but goes into greater depth and detail than the earlier study.

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[5] Our analysis focused on the TIDES organization as it existed at the time of our study, although we necessarily attended to the history of the organization going back to its inception in 2007, as well as giving consideration to future plans. Several positive changes have occurred since this study was completed, and these are discussed in the Postscript to this report.

[6] Linton Wells II and Walter L. Christman, "Transformational Initiatives in Civil-Military Operations: STAR-TIDES and Maritime Environments," in *Crosscutting Issues in International Transformation: Interactions and Innovations among People, Organizations, Processes, and Technology*, ed. Neal Derrick, Henrik Friman, Ralph Doughty, and Linton Wells II, 87-102 (Washington, DC: Center for Technology and National Security Policy, 2009).

[7] See Waterman, Peters, and Phillips, "Structure is not Organization."

[8] Paul T. Bartone and Linton Wells II, *Understanding and Leading Porous Network Organizations: An Analysis Based on the 7-S Model*, Defense & Technology Paper 70 (Washington, DC: Center for Technology and National Security Policy, 2009).

II. The 7-S Framework

The 7-S framework for organizational analysis was first presented in June 1980 and has been used extensively by organizations seeking to improve their functioning. An excellent short summary of the 7-S framework is provided by Jeffrey Bradach.[9] Figure 1 provides a graphic representation of the 7-S framework, and the various dimensions are further described below.
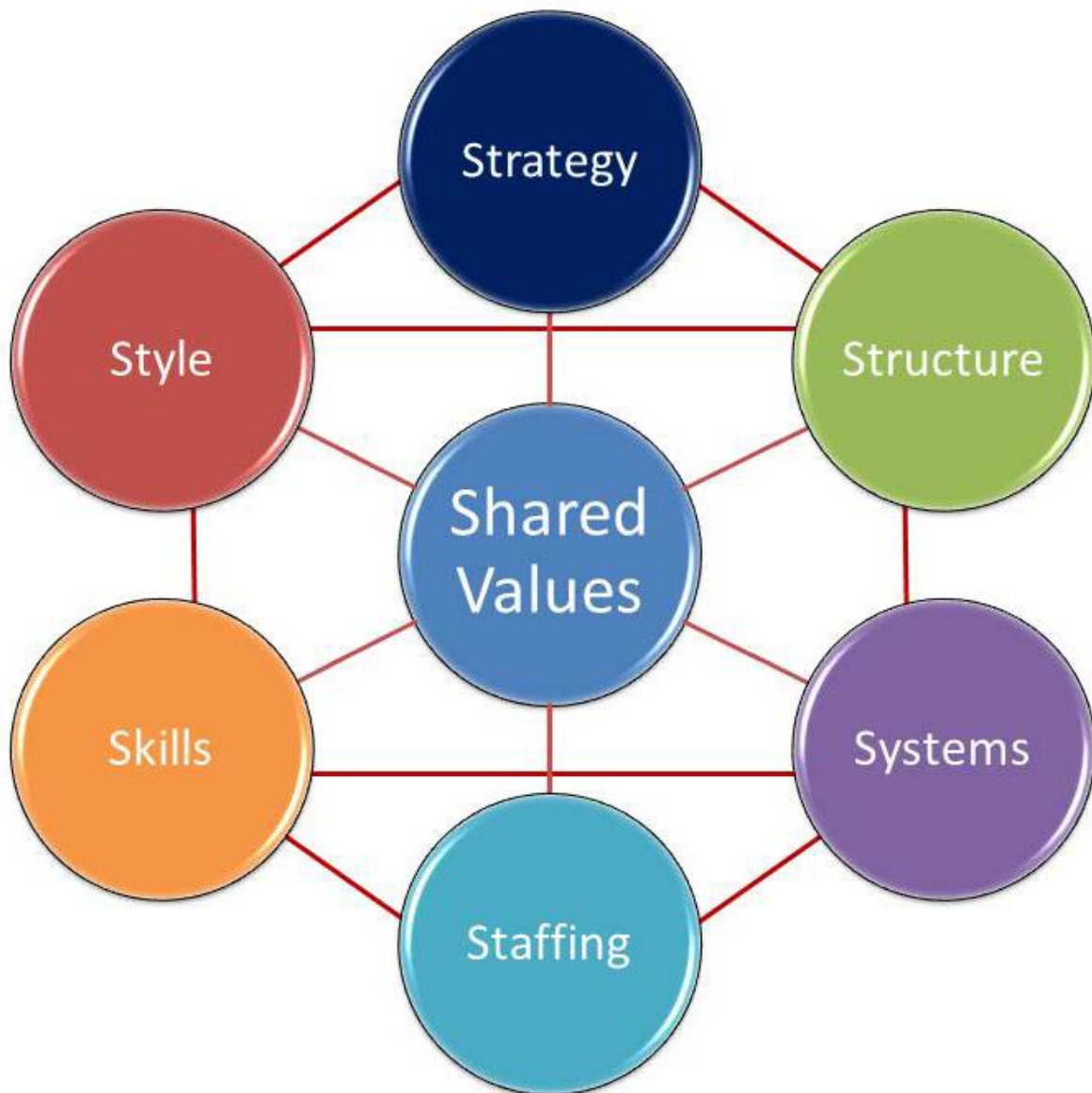

Figure 1: The 7-S framework

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[9] Jeffrey Bradach, "Organizational Alignment: The 7-S Model," *Harvard Business Review* (November 12, 1996).

1. *Strategy* concerns *what the organization does*, but more specifically, what it does that is special, that provides unique value. Oftentimes, an organization's strategy can be identified by carefully examining its goals or strategic priorities.

2. *Structure* refers to "…the way in which people and tasks are specialized and divided, and authority is distributed…. The basic grouping of activities and reporting relationships into organizational sub-units."[10]

3. *Systems* of an organization include all the procedures and daily activities within the organization that guide the staff in implementing the organizational strategy to get the job done. "Systems... [are] all the processes and procedures, formal and informal, that an organization uses to manage and regulate itself on a daily basis. The information people receive and what they are measured on and rewarded for [will] have a strong influence on what they pay attention to and act upon."[11]

4. *Staffing* broadly encompasses personnel. Specifically, all areas of personnel resourcing: selection, training, and development of employees.

5. *Skills* refers to the competencies of individual employees and of the organization as a whole.

6. *Style* concerns leadership. It is "the overall patterns of behavior of the members of the management team."[12] Style includes such variables as where leaders focus their attention, how they make decisions, and how subordinates are treated.

7. *Shared values* are the core guiding principles for members in the organization. They include the shared understanding for why the organization exists, its distinctive qualities, vision, and what things receive attention from top management.

The 7-S framework posits that in order for organizations to be effective, all 7 of these S factors must receive appropriate attention and resources, and importantly that they must be aligned with, and reinforce, each other. The 7-S framework also indicates that in order for an organization to succeed, it must be aligned with and responsive to the external environment. If the organization provides a product that nobody wants or needs, it will fail no matter how well its internal organization performs.

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[10] Jeffrey Bradach, "Organizational Alignment: The 7-S Model,"
[11] ibid.
[12] ibid.

III. Methodology

We gathered information about the TIDES project and STAR-TIDES network using multiple methods including semi-structured interviews, observations, and a detailed review of all available TIDES and STAR-TIDES founding documents. Observations focused mainly on the TIDES project team located within CTNSP at NDU. We observed the core staff in meetings and while going about their day-to-day activities, and also observed the workplace itself, the TIDES equipment storage room, and the documents storage cabinets. Documents reviewed included the TIDES training binder, book chapters, CTNSP reports, newsletters, brochures, and the STAR-TIDES web site (a complete list of documents reviewed is found in Appendix A of this report). A total of fifteen individuals were interviewed either in person, by phone, or in two cases, via email. Interviewees were selected based on their relationship with TIDES and STAR-TIDES. All core TIDES staff members were interviewed, as well as several others based on recommendations from the TIDES director. The interviewees came from varied backgrounds, and included current and former TIDES members, members of the extended STAR-TIDES network, interns, business consultants, and grant managers. Interviews were recorded and transcribed, and the transcripts subjected to thematic analysis by four of the study authors (P. Bartone, Vaitkus, Jocoy, and J. Bartone). A total of 762 interview minutes were recorded, yielding 157 single-spaced transcript pages. Transcribed interviews were analyzed case by case, question by question, and dimension by dimension (the 7 dimensions of the 7-S model), separately by each of the investigators in order to identify the central themes. Results were then analyzed and discussed in group meetings, and any discrepancies resolved.

Results

Below, we present our findings in order of the 7-S dimensions. Recommendations for enhancing the organization are provided throughout, and are also consolidated in a closing section. Greater emphasis is given to practical recommendations that can be implemented at little to no additional cost in terms of personnel or equipment.

1. *Strategy*

In 7-S terms, STAR-TIDES' Strategy was identified as its open, exploratory approach, and holistic emphasis on integrated, cross-cutting solutions to support validated DOD missions. While other organizations may share these qualities, STAR-TIDES is unique in focusing its efforts on improving the capabilities of United States Government (USG) agencies, in particular DOD, to engage with non-traditional mission participants, such as Non-Governmental Organizations (NGOs), International Organizations (IOs), and indigenous populations. In the 7-S framework these are the qualities that make STAR-TIDES special, providing unique value and a "competitive advantage."

In addition, STAR-TIDES continues to emphasize three key focus areas or activities, although these have changed slightly over the years. These also reflect the STAR-TIDES core strategy:

a. Information sharing: STAR-TIDES intends to develop better tools and systems for sharing open information[13] across organizational boundaries, especially from government to non-government operational partners. Doing so enhances the ability of civilian coalitions and groups to operate in the range of stressed environments—TIDES is broader than a focus on HA/DR operations. As described by one of the interviewees, "STAR-TIDES shares ideas, best practices, new technology and its integration, and new policies that affect the disaster relief, reconstruction and stabilization, and more generally, the international aid community."[14]

b. Network building: The program focuses on building bridges and ties among individuals, groups, and organizations. With extended social networks across boundaries, more talent can be leveraged and brought to bear on solving important problems, as well as greater cooperation and coordination in responding to the range of problems from post-conflict reconstruction to HA/DR operations. STAR-TIDES is "designed to build the conditions for sustained impact in a manner that can be scalable and repeatable based on the imperative of getting multiple stakeholders involved."[15] This extends the military's ability to cooperate and integrate with civilian government agencies and NGOs.

c. Low cost logistics: The program looks to economize logistics and supply chains by offering integrated infrastructure and life support solutions. Through the identification of low-cost, transportable, leave-behind logistic capabilities that are sustainable by local populations, not only is value added to local communities, but it ensures that large logistical trains from third-country donors are not required to maintain continued operation.

All of these activity areas can be applied to support and enhance civil-military operations in complex environments.[16] This may encompass post-conflict operations, HA/DR operations, and various shaping operations contributing to the prevention of conflict, which are sometimes called "steady state" or Phase 0 operations. Indeed, prevention of conflict is a stated priority in the recent U.S. *National Security Strategy*.[17]

This strategy of emphasizing information sharing, building networks of like-minded individuals and organizations, and providing low-cost logistics to achieve its goal of providing support to DOD missions gives STAR-TIDES a competitive advantage in that it is the only organization providing such a service to the USG. But this unique strength—its open, exploratory policy—carries with it some risk. The principal danger is that the organization will be overwhelmed with

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[13] Open information is a combination of unclassified information, which has been officially reviewed, and non-classified information that is important to the mission, but lies outside the realm of government control.

[14] Interview 2, TIDES project staff (email), October 17, 2011.

[15] Interview with Director, STAR-TIDES, August 10, 2012.

[16] The definition of complex operations has changed over time—sometimes including combat, sometimes excluding it, sometimes encompassing disaster relief, sometimes not, and usually focusing only on missions overseas. For example, the homepage of the Center for Complex Operations (CCO) at NDU <http://ccoportal.org > states that "stability operations, counterinsurgency and irregular warfare [are] collectively called 'complex operations.'" This paper adopts a more expansive definition that includes stability operations, humanitarian assistance and disaster relief (HA/DR), at home and abroad, and building the capacity of partner nations when civil-military activities are involved. This definition has been adapted from Hans Binnedijk and Patrick M. Cronin, eds., *Civilian Surge: Key to Complex Operations* (Washington, DC: NDU Press, 2009), 10. Most official definitions focus on subsets of this domain, but since many similar capabilities and procedures can be applied to multiple missions, there is value in addressing them comprehensively.

[17] *National Security Strategy of the United States of America* (Washington, DC: The White House, May 2010), 5, 22.

too many new ideas and/or projects, distracting personnel from its main goal and currently ongoing projects. This suggests the need for some kind of filtering or triage system to assure that the limited resources of the organization are not diverted unduly from high priority efforts.

Strategy Summation: The core strategy of STAR-TIDES is to support the open sharing of information and low-cost integrated solutions across all agencies and groups involved in HA/DR, conflict prevention and post-conflict aid and reconstruction. A unique strength of STAR-TIDES lies in its open, exploratory approach which provides a constant source of new ideas and information to DOD.

2. *Structure*

To understand the structure of STAR-TIDES, we must consider the organization at the extended network level, and also at the local level of the core TIDES management group at NDU. At the network level, STAR-TIDES reflects a porous network structure, as described more fully in *Understanding and Leading Porous Network Organizations: An Analysis Based on the 7-S Model.*[18] Membership in such organizations is fluid, shifting over time as interests and activities change. The extended open network of STAR-TIDES includes individuals and groups sharing common interests and goals, such as facilitating communication and cooperation across various agencies engaged in humanitarian relief efforts. Most of those involved are volunteers. Participants become involved for many reasons, and there are generally no authority lines or monetary reward systems.

Another unique feature concerns the organizing role of the charismatic STAR-TIDES founder and leader. For better or worse, it is the charismatic allure of a highly creative leader that causes many members to participate in the extended STAR-TIDES network. While the starfish model[19] implies this is a negative thing for the organization, it may be better construed as a strength that the organization should capitalize on.

Within the core NDU staff, our analysis shows that the structure of TIDES most closely resembles a matrix one.[20] The core staff is primarily composed of full-time Research Analysts and Research Associates (RA), supplemented periodically by interns who work on the project for brief periods of four to six months. Each RA functions like a division, responsible for a particular Combatant Command (COCOM). These responsibilities include the wide range of functions, communications, outreach, problem identification, and providing information, all relevant to the need of the particular COCOM. In addition, each RA is assigned responsibility for a particular government agency considered important to build bridges with, such as the United States Agency for International Development (USAID) and the Federal Emergency Management Agency (FEMA). At the same time, each RA is also responsible for a particular infrastructure functional area, such as water purification, integrated cooking, or Information and Communications Technology (ICT). This combined divisional and functional structure thus reflects a matrix organization, in the 7-S framework. The advantages of this structure are that the groups (RAs in this case) can operate with the autonomy of divisions, while at the same time can develop specialized expertise in particular functional areas. The drawback to such a structure is that it often leads to

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[18] Bartone and Wells, *Understanding and Leading Porous Network Organizations.*
[19] Ori Brafman and Rod A. Beckstrom, *The Starfish and the Spider: The Unstoppable Power of Leaderless Organizations* (New York: Portfolio, 2006).
[20] Jeffrey Bradach, "Organizational Alignment: The 7-S Model," *Harvard Business Review* (November 12, 1996).

high levels of ambiguity and confusion as to who is accountable for what, and who is in control. Another drawback in the case of STAR-TIDES is that the matrixed attributes reside within the individual RA rather than in a regional corporate team. Thus the typical strength of a matrixed team in terms of balanced expertise is difficult to achieve because it leaves each RA without any expertise to draw upon in several or more functional infrastructure areas.

The divisional structure makes some sense in terms of providing geographic focus and specialization, but carries the risk that RAs may end up working so autonomously that they fail to communicate with each other or coordinate their activities. This problem could be addressed by establishing a system to assure cross-RA communication, such as a weekly meeting. It was reported that, "the only time we all really collaborate on something is if it's participating in a joint exercise or if it's the demo[nstration], which is really a chance for everybody to contribute and bring in their contacts and ideas and that sort of thing."[21] Also, lines of authority have traditionally all gone to the Director, since no RA has had formal authority over other RAs, or even interns for that matter. It must be noted that the TIDES Director has recognized the need for a formal deputy for some time, but has faced persistent hiring restrictions.

Another problem is that it is often unclear who is responsible for what, so that for example a number of the staff are unsure who is responsible for maintaining the website. It likewise appears that no one person is responsible for the newsletter, or other communications and outreach methods; rather, everyone is. Similarly, no one person takes responsibility for updating or maintaining the "infrastructure" database, since it is a shared responsibility. This diffusion of responsibility can lead to key activity areas being neglected.

Structure Summation: The global STAR-TIDES organization is best described as an open network, with participants joining and leaving freely, contributing and maintaining contacts as interests and expertise coincide. At the core staff level, the TIDES project at NDU exhibits a matrix structure, representing a cross between divisional (regional) and functional structures. These structures are appropriate for these different parts of the organization, and generally supportive and well-aligned with the overall strategy.

3. *Systems*

Our analysis of systems issues focuses primarily on the TIDES project at NDU, rather than the global STAR-TIDES network. It is the job of the core staff to manage all STAR-TIDES activities, as well as to provide the mechanisms whereby the broad network is maintained and communication facilitated. To identify the systems that underlie the functioning of STAR-TIDES, we included questions in the interviews inquiring about the policies and rules employees are asked to learn and follow. We also drew upon the archive of STAR-TIDES documents, observations of STAR-TIDES core staff activities, and a careful examination of the work areas, including the STAR-TIDES equipment storage rooms and document library.

Daily tasks of the TIDES core staff largely focus on international and COCOM outreach, outreach to non-DOD USG agencies such as FEMA, The Department of Homeland Security (DHS), and USAID, global information sharing, and the search for new funding sources. TIDES/STAR-TIDES seeks to facilitate information sharing through both direct communication and the use of an Internet website, and through the planning and managing of onsite demonstrations of numer-

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[21] Interview 5, TIDES project staff, October 24, 2011.

ous varied technologies that can be applied to aid distressed populations when disasters or crises occur, or used to build resilience in advance of such events.

A well-developed system of procedures and materials provides training for new staff members. Training materials include hard-copy documents as well as video and online presentations. Some interviewees indicated that these materials are somewhat inconsistent and disjointed, and can leave new workers confused as to just what TIDES/STAR-TIDES really does, what its goals are, and how it intends to achieve them. Additionally, "the staff learn their tasks, responsibilities, and administrative duties through on-the-job training by either the most veteran STAR-TIDES staff, other colleagues in CTNSP, or through [the Director]."[22]

Many practices in the organization are communicated primarily via informal person-to-person exchanges, as opposed to more formal approaches such as published standard operating procedures. STAR-TIDES values the free and flexible flow of information and ideas both among and within groups. The relative lack of internal rules and formalized procedures may thus be a reflection of these values. Periodic attempts to implement standardized rules have met with limited success, as for example the policy requiring staff members to memorize specific talking points prior to the STAR-TIDES demo.[23] As we heard in our interviews, while staff members can memorize and recite the required words, many are not happy with this approach, and some report that it leaves them still lacking a true understanding of what STAR-TIDES is and does.[24] There is a need for a coherent, over-arching narrative which individual staff members can understand and articulate.

Multiple electronic systems are in use in TIDES/STAR-TIDES for contact management, none very effectively. Many of the important contacts are made by the Director, who then passes the information, such as business cards, on to TIDES RAs or interns, either electronically or physically. The electronic contact management system currently relied upon is Microsoft Outlook. While workable, this system is constrained by limited capability to share data with other software programs. A new open-source system known as "SugarCRM"[25] was selected and customized under contract to serve TIDES/STAR-TIDES' contract management requirements better. Unfortunately, this system has not proven to be useful for TIDES/STAR-TIDES due primarily to its inability to share information across platforms and within the secure NDU network. For example, many contacts made by the Director are preserved within his Blackberry smartphone device, which is an NDU network-approved device. Only after the SugarCRM system was selected was it discovered that information from an NDU device could not be transported directly into the SugarCRM database, due to NDU security restrictions. Looking forward, one development that could be helpful for TIDES/STAR-TIDES' contact management is NDU's movement to the Google government cloud as part of establishing a "bring your own device" (BYOD) environment. This new NDU computing environment should make it possible to more easily share contact data across different platforms.

The TIDES project and STAR-TIDES network have also encountered a number of information technology impediments related to the NDU Information Technology support framework. In addition to the portability problems mentioned above, there are severe restrictions on what software

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[22] Interview 2, former TIDES project staff, email on October 17, 2011.

[23] Interview 9, TIDES project staff, October 19, 2011; Interview 12, TIDES project intern, October 18, 2011.

[24] Interview 9, TIDES project staff, October 19, 2011; Interview 12, TIDES project intern, October 18, 2011; Interview 13, TIDES project intern, October 21, 2011.

[25] For more information, see SugarCRM, Homepage, available at <www.sugarcrm.com>.

programs may be used within the NDU network, as well as what hardware may be connected to the network. This has resulted in TIDES project workers sometimes having to rely upon their personal computers to conduct STAR-TIDES work.[26] Somewhat ironically for an organization so focused on ICT and communications technologies, TIDES project staff often have difficulty accessing the internet and communicating across platforms and applications from within the NDU facility. Cell phone reception is also poor at NDU, adding to the problem.

One of the main jobs of the core TIDES staff is to organize and conduct demonstrations during which a number of vendors from the private sector, as well as representatives of various government and non-governmental agencies (NGOs) display particular products or services that they can provide to agencies and organizations in crisis situations. Many standards are in place for setting up and managing these events. For example, in seeking participants to exhibit at the demos, TIDES staff may not contact or solicit the participation of any for-profit entity. However, a private sector exhibitor can be considered for inclusion if the contact is initiated by them, and not a government employee. Also, a TIDES policy clearly states that TIDES staff may not sell anything, accept gifts, or exchange favors with anyone within this context. This is to comply with government regulations regarding avoiding even the perception of conflicts of interest.

In support of the information exchange mission, the TIDES policy is to make freely available any information that can be legally shared. As a DOD-funded entity, however, there are some restrictions. For instance, one staff member explained that, "…military may not share their information with the for-profits, and vice-versa."[27] Yet, the STAR-TIDES rule or system is that requests for information should be honored, and information shared as long as it is ethically and legally permissible. In other words, TIDES/STAR-TIDES is to operate as an open-source, unclassified project. As part of the information exchange mission, STAR-TIDES is sometimes approached by organizations seeking solutions to particular problems they face when attempting to give aid to various groups. When directly asked to provide specific information, staff members understand they may not (as members of a government agency) endorse or promote any particular company or agency. They are, however, allowed to suggest several solutions and vendors that could directly fit the needs of the requestor, but never to recommend one. Beyond this, the recommended approach is to refer the requestor to the STAR-TIDES website where many possible solutions might be found. Our results showed that this approach does create some confusion for the TIDES core staff in terms of how to answer such queries properly, and how to provide useful information regarding solutions without giving recommendations. Often, such questions are simply referred to the TIDES Director.

Key systems for communication across the network include email, telephone calls, electronic newsletters, and the STAR-TIDES website. One of the important STAR-TIDES resources available through the website is known as the "infrastructures" database. This is a detailed compilation of useful information and potential solutions, most low cost, to the central problems of providing shelter, water, cooking, heating, cooling, lighting, power, sanitation, and communications. We were unable to identify any clear and consistent systems for maintaining and updating this database. Likewise, we did not discern consistent policies or systems addressing several important areas:

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[26] It should be noted that the Information Technology Directorate at the National Defense University is currently implementing a "bring your own device" environment, which may ease Information Technology functionality and open information sharing.

[27] Interview 8, TIDES project staff, October 17, 2011.

- Project management—tracking and reporting of progress on particular activities or task areas undertaken by RAs and interns.
- Evaluation, including recognition of accomplishments by either core staff, or extended network members.
- Prioritizing projects and efforts.
- Examining how to attract and maintain the voluntary participation of experts in the STAR-TIDES network.

Systems Summation: STAR-TIDES has a number of well-developed systems and procedures that guide how the work gets done. Systems for hiring and training interns and RAs for the core TIDES project are strong, as are procedures around planning and executing the annual STAR-TIDES demo events. Areas observed to have somewhat weak or lacking systems include: communications, both internal and external; project management and tracking; evaluation and recognition of core staff and network contributors; prioritizing efforts and projects; and attracting and maintaining active members in the global network.

4. *Staffing*

In the 7-S framework, "staffing" encompasses all areas of personnel resourcing including selection, training, and development of employees. The staff handles a wide range of functions including managerial, operational, clerical, financial, and legal. Here again, we focused primarily on the core team working on the TIDES project at NDU. However, we did explore the issue of how agencies and individuals are recruited into the STAR-TIDES network. According to the Director, STAR-TIDES participants are attracted to the organization through professional contacts at meetings and conferences, referrals from existing members, and occasional messages broadcast through the network inviting new members. Recently, however, the Director reports that "contact management efforts have really languished."[28] Currently, the majority of new STAR-TIDES participants are identified by the RAs and invited to join. Mechanisms for maintaining the network are not well developed, but include the distribution of regular e-newsletters, invitations to the demos, and direct communications on special topics via email and phone calls. It is generally left to network participants how involved they want to be.

To understand the staffing component of the TIDES project, we relied primarily on interview data and training documents. The majority of TIDES staff (RAs) are hired via the competitive Title 10 process. Potential employees are recruited using a standard advertisement. The Director also considers people who have indicated interest via the website. Those hired to work in TIDES typically have some background in government service. Military experience is considered highly valuable, as TIDES staff work closely with members of government, the military, NGOs, and the private sector. Ideal candidates have a special interest in the areas addressed by STAR-TIDES, and are enthusiastic about the work. Because the advertisement for RA positions is generic, and preparing more specific ones takes considerable time and effort, applicants do not always have the needed skill sets for TIDES, particularly with respect to information technology (IT), acquisition, and other technical expertise. Once staff members are hired, they undergo a training process which lasts three-to-six weeks. In addition to working on the project, RAs will read documents,

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[28] TIDES Director to Mark Vaitkus, personal communication on April 21, 2012.

subscribe to relevant newsletters, and attend conferences and events focused on their related areas.

Another vital component of the TIDES core staff is provided by interns, usually graduate students from the Washington, DC, area. Interns are generally selected by the TIDES RAs from a pool of potential interns, and offered a position on the project. Ideally, interns have some exposure to HA/DR activities and are taking related courses in their graduate programs. Once selected, interns undergo basically the same training as RAs, although it is less in-depth. Interns assist with filing, typing, and updating the website. Depending on interests and abilities, interns may also help with writing tasks, including contributing to the monthly e-newsletter. As compared to RAs, the interns are relatively short-term employees, staying for four to six months.

In *Understanding and Leading Porous Network Organizations*, the authors describe five functional areas that must be addressed by the organization's staff: managerial, operational, advanced clerical, financial, and legal. First, *managerial* functions involve hiring, firing, setting priorities, and establishing strategy. For TIDES, these tasks fall almost exclusively to the Director. However, since 2010 he has assumed multiple additional roles including Director of CTNSP, which limits the amount of time he has available to devote to managing TIDES.

Second, *operational* tasks include the planning and executing of demonstrations as well as purchasing, maintaining, and tracking project equipment and supplies. These are spread reasonably well throughout the TIDES project, although an excess of the workload has fallen on the de facto Deputy Director of TIDES's shoulders. Execution of the demonstrations is a team effort in which all of TIDES and much of the CTNSP staff assist. The de facto Deputy stores and manages demonstration equipment, and until recently was the primary organizer and point of contact for the demonstration participants.

Third, *advanced clerical* work such as maintaining the website, storing files, and engaging in correspondence gets spread fairly equally across the TIDES staff and interns. That said, it often appears there is uncertainty among the staff as to who is responsible for such basic tasks as updating the website and maintaining files and correspondence, and contact management. The TIDES project could benefit from greater clarity regarding roles and responsibilities.

Fourth, *financial* including budgeting and contracting concerns are not handled by any core members of TIDES. Instead, the Director generally relies upon NDU resources. Some fundraising is handled by the NDU Foundation, while bill paying and financial management are performed by a budget analyst within CTNSP.

Fifth, *legal* involves ensuring that the activities of the organization are lawful and appropriate. In the case of STAR-TIDES, legal advice is provided mainly by NDU's Office of the General Counsel.

A major challenge for TIDES is to ensure that all of these task areas get the attention needed, and none is neglected to the point that major failure occurs. These key tasks often take a back seat to the important work of interfacing with the COCOMs and other interested parties, developing STAR-TIDES network relationships, and maintaining those relationships. "Part of our role as the support staff is understanding and knowing when something is a top priority, and when other things can be put on the back burner. But that's like any job. It takes experience to learn that."[29]

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[29] Interview 5, TIDES project staff, October 26, 2011.

Staffing Summation: Our primary focus for this analysis was the core staff of the TIDES project, based at the Center for Technology & National Security Policy. This group consists of five-to-six RAs and three-to-four part-time staff interns. TIDES seeks to hire people with some government experience and familiarity with DOD. Staff also are typically interested in HA/DR, and civil-military relations, and often have experience with NGOs. Good communication abilities are essential. Although there is some specialization among the RAs, all are expected to be generalists who can perform any of the needed tasks of the organization. There is a recognized need for better operational management and task organization, perhaps in the form of a dedicated project manager or deputy director. At the broader level of the global STAR-TIDES network, "staffing" refers to the volunteer Subject Matter Experts (SMEs) who participate in STAR-TIDES events and knowledge-sharing activities. To recruit and retain network participants, STAR-TIDES uses word-of-mouth, conferences and demonstrations, various electronic communications, and its web site. Our analysis indicates that more needs to be done to encourage the active participation of STAR-TIDES network members, and to grow the network.

5. *Skills*

Skills refers to the talents and abilities of the individual employees, and also to the competencies of the organization as a whole. To perform the varied tasks of TIDES, staff members must have a broad range of skills and knowledge. They need to be able to write well with a strong attention to detail, communicate complex ideas in a simple manner, and build and maintain relationships with people from widely different functional, organizational, and ethnic backgrounds. They must be quick to perform follow-up, able to stay on task, and capable of working independently. A strong knowledge of international affairs and U.S. national security issues is very helpful, as is a flexible schedule. They need to be willing to work long hours; particularly should an emergency arise that requires their knowledge and assistance. The capacity to build relationships represents another important skill set for STAR-TIDES. In short, and by their own testimony, a successful TIDES employee needs to be smart, organized, flexible, and socially skilled. In order to facilitate their development in these areas, "we encourage both interns and RAs to attend trainings at various organizations to broaden their knowledge about HA/DR, SSR [Stability, Security & Reconstruction], BPC [Building Partner Capacity], and DSCA [Defense Support of Civil Authorities].... STAR-TIDES interns and RAs have attended a wide array of training [including] Red Cross [classes] in emergency response. We try to make sure that the RAs reach out to the networks and take advantage of free training [opportunities] that are out there."[30]

In addition to those skills, staff members also require a certain background and a willingness to build on their experiences. They must be able to interface well with DOD elements such as CO-COMs, and build relationships within other USG agencies as well as outside organizations. Staff must be flexible, able to adapt their manner of speaking and writing to government, NGO, private, and international audiences. Much of their work is social in nature and requires face-to-face, email, and telephone communication skills. Additionally, they must be skilled at using social networking sites like Facebook and Twitter, as this is a key method of spreading their mission. While the staff seem to do a good job at maintaining these social networking pages, more could be done to market them. As an example, consider the Twitter account: Currently, there are

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[30] Interview 5, TIDES project staff, October 24, 2011.

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a reported 1,500 nodes in the organization, yet only 908 followers.[31] It can be assumed that the majority of those followers are members of the network. If that is the case, then the staff's efforts to reach new audiences through social media are not succeeding very well, at least by this measure.

The Director believes that the writing and technological skills of TIDES project staff should be developed further. Some of these needs may be met by encouraging enrollment in professional courses such as business communication and time management. Certain types of expertise, however, will likely require more than just ancillary courses. For example, the need for a highly proficient website designer can probably best be met by hiring a dedicated staff member who is skilled and trained in web design. Given the federal government hiring caps currently in place, TIDES needs to find some way to address this issue while still abiding by NDU and DOD hiring limitations.

Several of the TIDES core staff expressed some frustration with the lack of clear guidance regarding job duties. One employee stated that "it can be demoralizing to come in and not have any idea what you're going to be working on from week to week."[32] By providing a clear structure within their job descriptions, the Director can still maintain a hands-off approach, while increasing the effectiveness of the organization.

Additional training courses were also suggested by some interviewees. For example, one of those interviewed indicated that RAs should take some "USAID courses, [the] State Department's Reconstruction and Stabilization course, FEMA basic course, and if possible the UNOCHA [United Nations Office for the Coordination of Humanitarian Affairs] course."[33] For the most part, TIDES staff already have the necessary skills to perform their jobs. Additional coursework and experiential learning will help to broaden their skills and make them more valuable and committed workers.

Skills Summation: Skills refers to the competencies and talents of individual workers, as well as to those of the organization as a whole. Participants in the global STAR-TIDES network have expert knowledge in various areas that is of value to the rest of the network and to the range of organizations that STAR-TIDES seeks to support. Individual employees of the TIDES project at NDU are selected for their interest in, and knowledge of the various activity areas of STAR-TIDES, and then are trained and developed further in these areas. While all core TIDES staff are expected to be generalists, some greater specialization and clear responsibility areas would serve the project well.

6. *Style*

In *Understanding and Leading Porous Network Organizations*, Bartone and Wells discuss STAR-TIDES leadership in terms of "actively engaging the extended, open network via emails, phone calls, blogs, and face-to-face meetings to confront compelling problems." Leadership is "mainly focused externally—on raising the funds needed to sustain the organization…and on the

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[31] STAR_TIDES (STAR_TIDES), *Twitter*, as of February 19, 2013, available at <https://twitter.com/STAR_TIDES>.
[32] Interview 6, TIDES project staff, October 19, 2011.
[33] Interview 2, TIDES project staff (email), October 17, 2011.

experts and agencies whose help and cooperation is needed to solve problems."[34] Relationships and shared common goals are more important than "authority relationships" for getting the work of the organization done. Convincing, inspiring, and cajoling therefore become important leader behaviors with respect to volunteers in the network. Volunteer contributions must be rewarded or otherwise recognized. Email is a critical tool to "convey respect, courtesy, humility, ...[and] gratitude" within the network. Leaders must ALSO manage the internal functions, activities, and essential tasks performed by a small staff. Regarding the latter, "leaders must be flexible in balancing between accommodation and patience on the one hand and providing direction and setting clear tasks and deadlines on the other." Style must be adjusted "quickly to match context and circumstances."[35]

Leadership of TIDES/STAR-TIDES, as embodied by the Director, represents a singular organizational strength, especially in terms of the Director's connections and diplomatic powers of influence throughout the network. The Director is the focal leader and, almost exclusively, the only defined leader in TIDES. As one core team member put it, "There's the Director, and then there's everyone else, and that's pretty much it."[36] Therefore, there is no executive or management team to speak of. As a result, the Director's priorities and leadership style are paramount for understanding what gets done and does not get done in STAR-TIDES. Without the Director, there is general agreement or at least some fear among respondents that TIDES is "kaput."[37]

That said, it is difficult to categorize the Director's leadership style. It is definitely both complex and flexible. It is variably described as directing,[38] coaching,[39] or delegating,[40] depending on the type of respondent and type of task. Such a demonstrated capacity to adjust leadership style to fit the social context falls consistently in line with the functional needs of a network organization. Furthermore, both inside and outside of the TIDES core team, there is agreement that the Director is incredibly smart, "a stunning intellect,"[41] and perhaps a "genius,"[42] with grand concepts and ideas to match.

What appears relatively lacking in all of these accounts is the sense of emotional support from leadership, especially with respect to the core team. While the Director can be "encouraging,"[43] by and large staff members do not have a sense of how well they are doing or even, at times, what they should be focusing on. Interestingly, even though it is not his preferred mode, the Director is sometimes perceived by subordinates as quite directive[44] and even "micromanaging."[45] This is seen, for example, with respect to executing the STAR-TIDES "elevator speech" and writing competent reports, which one of his former core team members describes as including an

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[34] Bartone and Wells, *Understanding and Leading Porous Network Organizations*, 11.

[35] Bartone and Wells, *Understanding and Leading Porous Network Organizations*, 11-12.

[36] Interview 6, TIDES project staff, October 19, 2011.

[37] Interview 9, TIDES project staff, October 19, 2011.

[38] Interview 12, TIDES project intern, October 18, 2011.

[39] Interview 1, STAR-TIDES network member, October 12, 2011.

[40] Interview 12, TIDES project intern, October 18, 2011.

[41] Interview 10, STAR-TIDES network member, October 28, 2011.

[42] Interview 3, STAR-TIDES network member, October 13, 2011; Interview 7, TIDES project staff, October 17, 2011.

[43] Interview 5, TIDES project staff, October 26, 2011.

[44] Interview 12 TIDES project intern, October 18, 2011.

[45] Interview 9, TIDES project staff, October 19, 2011; Interview 12, TIDES project intern, October 18, 2011.

undue obsession with adverb placement.[46] Overall, however, and due to his elevation to CTNSP Director, the Director has now become more remote concerning the care and nurturing of his TIDES staff. This is particularly true when it comes to the reported lack of project meetings and specific guidance, a fact that he is very much aware of. His current interaction with TIDES staff can therefore be described as irregular, if not haphazard, aside from the contact he has with them as general members of CTNSP. He is sometimes seen as nonresponsive to e-mails from core staff.

When it comes to making decisions, the Director is the ultimate arbiter. With rare exception, the Director appears to be the driver of new work. He prefers a "white board" approach as a way of facilitating full staff participation in the decision-making process. There is the perception, however, that while "other ideas are invited for discussion… [the] concerns/priorities of the Director often later trump those ideas."[47] The Director does not always have time to conduct project-wide strategic planning. The staff is comfortable making decisions related to minor issues and solving problems on their own, but would prefer and welcome more input from the Director on work priorities and strategic direction, especially given his penchant for new ideas. With respect to those new ideas, staff members are occasionally confused about what they mean for TIDES/STAR-TIDES in a practical sense, and for their own roles in particular. At the same time, there is some sentiment among the core staff that the Director "has his hands on everything."[48] As one person explained, "If we need support or assistance, we are able to ask one another. But if there are certain decisions that need to be made [on a] higher level, then it's the Director."[49]

For his part, the Director does not wish to be a hand-holding, let alone a directive or authoritarian leader. However, he will step in if he deems it necessary to enforce quality control. His goal is to have mature subordinates who will have the courage to tell him that his frequent ideas are good or bad, and, even if good, may not be presently feasible in light of existing resources.[50] Finding such courage is challenging for staff members, especially among the more junior ones.

It is via the de facto Deputy's instrumental efforts and organizational skills that key system activities such as the demonstrations, including initial vendor screening and setup, and new member training, including training binder and briefing maintenance, are achieved. This senior RA has also made significant housekeeping strides with respect to the STAR-TIDES equipment storage room and document archiving. However, the incumbent accomplishes all this without additional formal status, compensation, or even much in the way of recognition. The shared perception of all the RAs is that the Director alone is their supervisor and constitutes "top management." Their socialization is, therefore, largely self-guided. The de facto Deputy sees what needs to be done, for example, with respect to the website, but does not have the formal authority, either within or outside of the TIDES team, to require people to act. No doubt due to the central role of this RA in the training and supervision of interns, the latter view the Deputy somewhat more deferentially, as their "go-to" person for questions. The lack of a formal deputy is far and away the primary weakness of the TIDES project identified by respondents.

Style Summation: In the 7-S framework style refers to leadership. In the STAR-TIDES organization as it existed at the time of our study, leadership rested almost exclusively with the Director.

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[46] Interview 9, TIDES project staff, October 19, 2011.
[47] Interview 2, former TIDES project staff, email on October 17, 2011.
[48] Interview 5, TIDES project staff, October 24, 2011.
[49] Interview 5, TIDES project staff, October 24, 2011.
[50] Interview 11, STAR-TIDES Director, November 9, 2011.

The Director displays a flexible leadership style, adjusting rapidly to the situation and audience. He is a valuable source of ideas, social contacts, and integrative concepts that inspire and motivate members of the global network, as well as local TIDES project staff. The leadership climate or style within the TIDES project is one in which all project workers are expected to operate independently, and to pursue their tasks diligently and effectively without close supervision. At the same time, the Director is at times more directive and closely attentive to details. The core TIDES staff reports some confusion about project priorities and overall directions, what others are doing, and whether their efforts are considered important and successful.

7. *Shared Values*

In the 7-S framework, shared values means the core or guiding principles that provide a sense of purpose for members throughout the organization. They reveal what is truly important to the organization and guide action regardless of what the published objectives might state or how environmental conditions might change. They include the shared understanding for why the organization exists, its distinctive qualities, vision, and what things receive attention from top management.

To fully identify shared values within TIDES/STAR-TIDES today, one would have to begin by asking members to espouse or state the values of the organization as they understand them, and then assess whether these values and/or others are truly shared and internalized across the membership. Ideally these values are then manifested by actual behavior, beginning with that of the core team. Such a full scale investigation is beyond the scope of the current project. First, note that defining the membership of TIDES/STAR-TIDES as a whole, especially those who truly identify themselves as part of the STAR-TIDES network, is problematic. Furthermore, deliberate socialization or educational training regarding TIDES/STAR-TIDES appears limited to new TIDES core staff and interns. Thus it is difficult to generalize about the values held or not held by all of the members of the global STAR-TIDES network, who were not systematically sampled for this study. It is only an assumption that those who participate with TIDES on projects or activities, or simply sign up ("join") on the website, may share the values stated in STAR-TIDES materials. With respect to the TIDES core team, certain inferences can be made based on stated characterizations of STAR-TIDES, but how deeply held such inferred values may be, especially as reflected by day-to-day performance, cannot be concluded with any certainty. Through multiple interviews with the Director, we arrived at the following list of belief statements that theoretically comprise a "values manifesto" for STAR-TIDES:

- We promote solutions that support survival and a better life for populations under stress.
- We have a culture of dedication, interest, and enthusiasm for what STAR-TIDES stands for with the concurrent drive to do the research and find solutions.
- We possess an entrepreneurial and proselytizing spirit, an expectation to take the initiative, promote solutions, and "make things happen." We are a culture of "doers" and "go-getters."
- We add value by bringing together diverse backgrounds to expand the field and applicability of solutions.
- We display flexibility and engage with the leading edge of culture change in the USG with respect to identifying and adopting technology solutions.
- We balance technological savvy with expertise in international relations.

In order to distill the shared values of TIDES/STAR-TIDES members themselves, we focused on responses to the following six interview questions: 1) What is the work of STAR-TIDES? 2) How does STAR-TIDES measure success? 3) What competencies or skills does one need to work well in STAR-TIDES? 4) Why does STAR-TIDES exist and what is the vision? 5) What kind of issues get the most attention from top management? and 6) What are the strengths of STAR-TIDES? The inferred values from current interviews include:

- Preserving and protecting life through innovation, both technical and bureaucratic, for populations under stress as a result of war or natural disaster.
- Collaborative exchange and sharing everything.
- Communicating effectively to enhance sharing.
- Cooperation and social competence.
- Capitalizing on diversity to enhance the value of sharing; maintaining an "internationalist perspective."
- Balancing creativity with practical utility.
- Fostering whole-of-government approaches and not being constrained by organizational stovepipes.
- Being proactive and dedicated to action. Getting things done.

It is recognized that these are ideal or aspiring principles, and are not yet fully realized in the TIDES/STAR-TIDES culture. For the most part, however, there is fairly good overlap between what the Director states as the driving forces for TIDES/STAR-TIDES action and those articulated by TIDES staff and others interviewed. At the same time, the caveat remains that we do not have a definitive grip on what respondents firmly believe on a personal level versus what has been learned and repeated based on formal sources.

We identified two values or motivating forces that, while not widely shared across all interviewees, were nonetheless of significant concern to members of the TIDES core team:

- Responding expeditiously to COCOMs. This appears to be a DOD-related value ingrained in the TIDES core team that is somewhat at odds with STAR-TIDES ideals expressed by others.
- The Director's current interests and priorities and his sense of where TIDES/STAR-TIDES can make the biggest difference or contribution determines what implicitly deserves and gets the attention of the TIDES core staff. This perception appears to have led to some lack of focus or direction, if not outright confusion, about what the true purpose of TIDES/STAR-TIDES is and where energies should be directed at any point in time, or in the short- versus long-term.

Shared values in the 7-S model is commonly interpreted as a stand-in for organizational culture. Thus, it is also useful to examine culture writ large in terms of physical artifacts, in addition to "shared values" per se.[51] Observable artifacts, at least those visible on an everyday basis that carry particular importance and meaning for TIDES/STAR-TIDES members, appear few and far between. Aside from the TIDES closet that is used primarily for storage of equipment used in the demonstrations, we found nothing that identifies a TIDES/STAR-TIDES space within the CTNSP office area. Nor do core staff members have any identifying signs on their doors or anything that identifies them as TIDES personnel on their persons.

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[51] See Edgar H. Schein, *Organizational Culture and Leadership, 4th Ed.* (San Francisco, CA: Jossey-Bass, 2010).

The TIDES demonstrations are a better venue for examining STAR-TIDES artifacts. TIDES does have a set of hats and t-shirts, posters, and other items that are brought out for these demonstrations. There seems to be some confusion, however, about who gets to wear TIDES gear and logos. At the demos, certain technologies and their vendors seem to have achieved iconic status within STAR-TIDES, and have deeply rooted associations with the organization. Examples of these include the hexayurt shelter, first provided by the Hexayurt Project,[52] and Ms. Pat MacArdle, an expert and teacher on the use of solar cookers.[53] Here, it is interesting to note that the hats, brochures, and some of the training materials portray only the logo with the acronym TIDES, whereas other materials, and especially the website, carry the full STAR-TIDES acronym. It is unclear how important the distinction between TIDES and STAR-TIDES is to the core team members in terms of their own identification with the organization. Some definitely do not think the distinction is important from a practical viewpoint.[54] It is also unclear how their TIDES/STAR-TIDES identity compares in strength to their identity as members of CTNSP or NDU. We did not detect any identification at all with NDU's umbrella research entity, the Institute for National Strategic Studies (INSS).

Brochures and the STAR-TIDES website are probably the best everyday examples of artifacts, but even these do not have high visibility or apparent relevance in the NDU physical space. Outside of the demos, it is difficult to observe outward and routine examples of what could be construed as exhibitions of TIDES organizational pride or success.

Shared Values Summation: On a manifest level, the shared values of the STAR-TIDES organization are reflected in the stated goals and missions, the "strategy" of the organization. These are to support the open sharing of information and low-cost integrated solutions across all agencies and groups involved in HA/DR, conflict prevention and post-conflict aid and reconstruction. Based upon our interview data, the shared values across those working in the organization include being open to new ideas and solutions and freely sharing these, striving to improve the lives of people in stressed environments through knowledge and low cost technical solutions, open and collaborative exchange across agencies and groups, flexibility, and an action-orientation. Our analysis of cultural artifacts within the TIDES organization showed few outward indicators by which to infer shared values. This is a concern, since artifacts not only express the core values of the organization, but also serve to reinforce them.

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[52] *The Hexayurt Project: Free Hardware Housing for the World*, Homepage, available at <http://hexayurt.com/>.
[53] *Solar Cookers International*, Homepage, available at <www.solarcookers.org>.
[54] Interview 3, STAR-TIDES network member, October 13, 2011; Interview 5, TIDES project staff, October 26, 2011; Interview 10, STAR-TIDES network member, October 28, 2011.

IV. Recommendations

Our analysis of the TIDES/STAR-TIDES organization according to the 7-S framework led to a number of recommendations for improved functioning. Understanding the reality of limited resources, we focus on recommendations which are relatively cost-free (level 1). Additional recommendations (levels 2 and 3) entail some costs. Many of these recommendations could apply to other organizations of the open network type, similar to TIDES/STAR-TIDES. The information in square brackets indicates which of the 7-S elements is addressed by the recommendation.

Level 1 Recommendations (can be implemented at little or no additional cost):

1. Convene an in-depth strategic review meeting to clarify and reinvigorate the core purpose of TIDES/STAR-TIDES and its goals. Revise STAR-TIDES publications, website, and demonstration and workplace artifacts as needed to consistently reflect the revitalized goals and strategy. [Strategy, Style, Staffing, Systems, Shared Values]
2. Provide display boards in the workplace including photos to help illustrate TIDES/STAR-TIDES goals, highlight current projects, and celebrate past successes. Consider periodic mini-demonstrations in the Lincoln Hall courtyard or other locations around the NDU campus to show off recent infrastructure solutions and technologies. This can be an intern project with RA oversight. [Shared Values, Strategy]
3. Hold a TIDES team meeting every other week. Rotate responsibility for organizing the meeting and collecting agenda items among the experienced RAs. Have an intern or other RA take minutes. Have the organizing RA review and send out the minutes to the team and the Director, with back-brief to the Director as desired. [Structure, Staffing]
4. Hold a weekly 20-30 minute "beverage/snack break" when all available TIDES team members can check in with one another. TIDES RAs and interns can bring their own refreshments as desired to the breakroom or NDU cafeteria, or if feasible TIDES can supply refreshments. [Shared Values, Style]
5. Schedule a field trip two to three times a year to an appropriate local site, such as the headquarters of FEMA, USAID, or the World Bank. Use an NDU van and provide a lunch. [Shared Values, Strategy, Style, Staffing]
6. Once every year, hold a tabletop exercise to simulate TIDES response to a natural disaster or humanitarian crisis scenario. This should include energizing willing members of the STAR-TIDES network. Also invite other potentially interested parties at NDU, such as those involved in public-private cooperation, the rapid fielding of capabilities through the Joint Capability Technology Demonstrations (JCTDs), as well as other like groups. Similarly, other Centers and Colleges at NDU, with particular reference to the Center for Complex Operations (CCO) and the Center for Applied and Strategic Learning (CASL) should be invited along. [Skills, Systems, Strategy, Shared Values]
7. Add social time before and after demonstrations so vendors can get to know one another's product solutions and think about cross-fertilization and systems integration possibilities. Post-demonstration space for continued conversations should be established on the STAR-TIDES website to foster and monitor continuing integration discussions. All participants should receive an STAR-TIDES hat, button, or lapel pin. [Strategy, Shared Values, Systems]
8. Review annual event commitments to assess the costs/benefits of participation and execution, especially over the next year. Leverage the networked and educational assets available in or-

ganizations such as the Armed Forces Communications and Electronics Association (AFCEA) and the National Defense Industrial Association (NDIA). [Systems, Strategy, Shared Values]

9. Publicly praise in person and in publications good TIDES team work and individually recognize deserving members with, at minimum, written commendations with the possibility of other rewards such as time off, physical tokens of appreciation, or being taken to lunch. [Style, Shared Values, Systems]

10. Transfer aide or executive assistant tasks for Director, CTNSP, away from the TIDES team. [Structure, Style]

11. Assign TIDES-allocated interns to a specific RA for day-to-day oversight and supervision. [Structure, Staffing]

12. Use an intern or RA to develop an inventory, readiness, and accountability system for the STAR-TIDES storage room(s). [Systems]

13. Assign a single RA or the Event Coordinator to be the point of contact for specific administrative tasks that can suffer neglect, such as website updates, newsletter, and Sugar, and have that person be responsible for the maintenance of that specific task, to include sending out reminders to everyone to submit their contributions. [Structure, Staffing]

14. Determine a core of activities for RA professional development, to include courses and other short-term training or educational opportunities that RAs can take together. Then have each RA supplement with additional coursework as personally appropriate (e.g., public speaking). [Staffing, Skills]

15. Update and streamline the training binder to include a table of contents, organizational policies and behavioral guidelines, and recent successes. [Systems, Staffing]

16. Provide general guidance for how much time on average should be spent on tasks that often get neglected, like maintaining social media sites, newsletter submissions, updating the website, Sugar. [Style, Systems]

17. Develop talking points for the TIDES brochure that capture the key concepts and takeaways accurately, but allow some flexibility for the RAs and interns in their delivery. [Systems, Style, Shared Values]

18. Review the current "Joint and Coalition Operations Support" Statement of Work to identify potential Quick Wins whose completion can be accelerated.[55] [Strategy, Systems, Style]

19. Keep track, in a shared drive folder, of all positive network feedback received both collectively and individually by the TIDES team and highlight examples in the newsletter with simple counts as appropriate. [Systems]

20. Solicit help to fix the appearance and profile of the STAR-TIDES Facebook page. Set targets to expand followers. [Systems, Strategy, Skills]

21. Improve the filing system with better indexing systems, alphabetized filing, and regular maintenance. [Systems]

22. The RA assigned to manage the STAR-TIDES website should periodically capture views, reflections, and input from the Director and post on behalf of the Director. [Systems, Style, Strategy]

23. Indicate TIDES team membership with a special project tag or title on office door. Consider TIDES pins and/or NDU badge augmentation that conveys TIDES identity year-round. [Shared Values, Staffing]

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[55] Office of the Director, Defense Research and Engineering (DDR&E), memo, "Technical POC Joint Operations Support (JOS)," April 12, 2010.

24. Publish more articles on actions by, and ideas on, TIDES/STAR-TIDES, in diverse venues, including well-respected, peer-reviewed publications. [Strategy]
25. Work to develop more self-supporting projects within the STAR-TIDES network, which was a key piece of the original concept of the project. [Strategy, Systems]

Level 2 Recommendations (require some additional cost):

1. Hire a Project Manager or Deputy Director for TIDES. [Staffing-Structure]
2. Begin recruiting for a Board of Advisors and outlining its structure, processes, and connections vis-à-vis STAR-TIDES and the NDU Foundation. [Structure, Strategy, Systems, Shared Values]
3. Schedule envoy trips to each U.S. Combatant Command, identify good mid-level points of contact, brief the Contacts at least twice a year on relevant STAR-TIDES activities, gain input from those Commands, and be proactive regarding point of contact succession. [Structure, Systems, Strategy]
4. Consider temporarily scaling back coverage of all Combatant Commands or regions to consolidate wins and promote team efforts in one or two regions until staff can be brought up to full capacity. [Structure, Staffing]
5. Hire a dedicated webmaster with web design skills. Alternatively, contract out initial redesign and have a dedicated person who can handle maintenance and revisions. This individual must be able to interface successfully with the NDU Information Technology Directorate and Chief Information Officer. [Staffing, Skills]
6. Hire a Public Relations specialist, with social media and marketing skills, to include newsletter writing and publication. [Staffing, Skills]
7. Reach out to civilian organizations with similar objectives, such as Architecture for Humanity, Humanitarian International Services Group (HISG), and Akvo, to ensure TIDES acts as the "go to" or continuing liaison for DOD-related support. [Strategy, Structure, Shared Values]
8. Continue to investigate funding stream avenues, to include the NDU Foundation, for short and long-term TIDES support, recognizing that rules involving the use of NDU Foundation funds have recently been tightened. [Systems, Structure, Strategy]
9. Increase core staff to more evenly balance functional area expertise and responsibility. [Staffing, Structure, Skills]

Level 3 Recommendations (long term strategic considerations):

1. Identify strongest elements and functions of STAR-TIDES, such as open information sharing and website, and spin these off to other organizations that can keep them running. [Strategy, Structure, Shared Values]
2. Develop an RA "career track" with sufficient professional development, reward, and promotion opportunities to extend expected TIDES member lifespan. All CTNSP RAs should have individual development plans (IDPs). The key point is that they should have a publications portfolio, be recognized as SMEs, and be invited to participate in outside panels and conferences. [Staffing, Skills, Style]

3. Investigate recruiting uniformed active duty, reserve, and National Guard for a short or long-term assignment. The Afghanistan-Pakistan Hands activity, and the upcoming Asia-Pacific Hands provide models for how this is done. [Staffing, Skills]
4. Investigate moving STAR-TIDES to another DOD or USG agency. [Strategy, Structure, Shared Values]
5. Consider spinning-off STAR-TIDES as a 501(c)(3)[56] entirely, or with a mirror non-profit counterpart. [Strategy, Structure, Shared Values]

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[56] A 501(c)(3) is a tax-exempt nonprofit organization. These may be religious, educational, charitable, scientific, literary, or public health and safety in nature.

V. Postscript

Although we reviewed the history of TIDES/STAR-TIDES going back to its inception in 2007, in addition to taking into account proposed future plans, the analysis in hand necessarily reflects the organization as it existed at the time of data collection. As a living and learning organization, it is not surprising that the present-day TIDES is a somewhat different entity than the one revealed here; TIDES is changing. Importantly, several key findings and their related recommendations were understood or anticipated prior to this report's completion and are currently in various stages of implementation.

The most significant of these recent organizational changes involve the areas of Structure, Staffing, and Skills, and are intended to better align TIDES within the larger external organizational contexts of CTNSP, NDU, and DOD. This is what led to the creation and hiring of a Director of the Civil-Military Activities Integration (CMAI), who now has direct project manager oversight of TIDES. In addition to helping distribute the organizational responsibility load of the CTNSP Director, this position directly addresses mission areas emphasized in the 2012 *Defense Strategic Guidance*[57] and *Quadrennial Roles and Missions Review*[58] related to civil-military support for counterinsurgency, stability, humanitarian, and disaster relief operations. Due to NDU full-time equivalent restrictions and other recruiting hurdles, it has taken nearly two years to execute this personnel action. The new CMAI Director, Mr. David Becker, has the foreign-service skill set needed to advance the strategic goals of the organization.

The other major staffing change concerns the naming of one of the Research Associates as TIDES Deputy Director. While the specific responsibilities of this new role have yet to be formalized vis-à-vis the CMAI Director, the potential now exists for clearer management with better coordination and accountability for work flow. Efforts are also underway, though obviously within current NDU and DOD resource constraints, to convert the now-contract event coordinator to a government position, and to hire a dedicated part-time webmaster as well as other expert consultants to support the work of the TIDES team. A combination of part-time staffing, contracting, and Intergovernmental Personnel Act (IPA) solutions will undoubtedly be needed to achieve these staffing goals.

Similar challenges exist with respect to funding, especially with the threat of significant federal budget reductions on the horizon. While TIDES has historically been successful in creatively leveraging funding from DOD and other sources outside of NDU, more work is being done to explore cross-cutting or interlocking approaches that might lead to shared funding with other CTNSP projects such as the JCTDs, Joint Improvised Explosive Device Defeat Organization (JIEDDO), Social Media Technology Limited Objective Experiments (SMT LOE), and human hardiness, as well with those within NDU like the CCO, CASL, the i-College, the Center for Hemispheric Defense Studies (CHDS), and the Industry Studies program at the Eisenhower School. Such outreach *within* the larger NDU organization is crucial due to the unpredictability of external funding and its legal acceptance. Actions like this are also essential in order to successfully meet the Chairman of the Joint Chiefs of Staff-mandated mission for NDU and its tenant organizations:

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[57] *Defense Strategic Guidance: Sustaining Global Leadership: Priorities for 21st Century Defense* (Washington, DC: Department of Defense, January 2012), available at <www.defense.gov/news/Defense_Strategic_Guidance.pdf>.
[58] *Quadrennial Role and Missions Review* (Washington, DC: Department of Defense, January 2009), available at <www.defense.gov/news/jan2009/qrmfinalreport_v26jan.pdf >.

> National Defense University supports the joint warfighter by providing rigorous Joint Professional Military Education to members of the U.S. Armed Forces and select others in order to develop leaders who have the ability to operate and creatively think in an unpredictable and complex world.[59]

The NDU Strategic Plan of January 2013 provides clear guidance that the pathway to mission fulfillment implies an organizational transformation as follows:

> NDU will evolve into One University marked by preeminence and collegiality in education and professional development, scholarship, outreach and collaboration, and institutional support to support the University's mission and academic priorities. NDU will leverage and integrate the strengths and best practices from each college, school, program, and component to produce synergy, unity of effort and purpose, continued forward movement, alignment, and excellence across the University.[60]

None of the proposed objectives to better align the TIDES organization within and across the larger NDU organizational structure necessarily precludes or diminishes the ongoing role of the global STAR-TIDES network to contribute to successful project outcomes. On the contrary, it doubtless makes pursuing such contributions more critical. In any event, TIDES/STAR-TIDES remains dedicated to its original intent to facilitate open information-sharing on a global scale to respond to HA/DR needs while serving the strategic interests of the USG. While such a vision remains a highly ideal one in the admittedly complex organizational environment in which TIDES presently exists, the possibility of moving closer to its realization easily legitimates the daily struggle.

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[59] *National Defense University Strategic Plan* (Washington, DC: National Defense University, January 22, 2013), 5, available at <http://intranet.ndu.edu/Transformation/NDU%20Strat%20Plan%20Final.pdf>.
[60] ibid.

VI. Appendix A: Documents Reviewed

Brochures

- Center for Technology and National Security Policy, *TIDES: Transportable Infrastructures for Development and Emergency Support*, January 22, 2008.
- Center for Technology and National Security Policy, *TIDES: Transportable Infrastructures for Development and Emergency Support*, March 24, 2008.
- Center for Technology and National Security Policy, *TIDES: Transportable Infrastructures for Development and Emergency Support*, April 1, 2008.
- Center for Technology and National Security Policy, *TIDES: Transformative Innovation for Development and Emergency Support*, September 21, 2009.
- Center for Technology and National Security Policy, *TIDES: Transformative Innovation for Development and Emergency Support*, February 6, 2010.
- Center for Technology and National Security Policy, *TIDES: Transformative Innovation for Development and Emergency Support*, March 11, 2010.
- Center for Technology and National Security Policy, *TIDES: Transformative Innovation for Development and Emergency Support*, December 4, 2010.
- Center for Technology and National Security Policy, *TIDES: Transformative Innovation for Development and Emergency Support*, January 5, 2011.
- Center for Technology and National Security Policy, *TIDES: Transformative Innovation for Development and Emergency Support*, February 5, 2011.
- Center for Technology and National Security Policy, *TIDES: Transformative Innovation for Development and Emergency Support*, April 7, 2011.

Presentations and Publications

- Paul T. Bartone and Linton Wells II, *Understanding and Leading Porous Network Organizations: An Analysis Based on the 7-S Model*, Defense & Technology Paper 70 (Washington, DC: Center for Technology and National Security Policy, 2009), available at <www.ndu.edu/CTNSP/docUploaded/DTP%2070%20Understanding%20and%20Leading%20Porous%20Network%20Organizations%20%2060039.pdf>.
- Jeffrey Bradach, "Organizational Alignment: The 7-S model," *Harvard Business Review* (November 12, 1996).
- *TIDES New Hire Project Briefing*, Training Binder, 2010. Contains emails, abbreviations guide, TIDES log-in information, computer use instructions, training quiz, and guidelines to joining the TIDES project.
- *TIDES Statement of Work: Joint & Coalition Operations Support*, April 21, 2010.
- *TIDES Statement of Work: Joint & Coalition Operations Support*, May 7, 2012.
- Linton Wells II, *Sustainable Support to Populations Under Stress*, PowerPoint, undated.
- Linton Wells II and Walter L. Christman, "Transformational Initiatives in Civil-Military Operations: STAR-TIDES and Maritime Environments," in *Crosscutting Issues in International Transformation: Interactions and Innovations among People, Organizations, Processes, and Technology,* ed. Neal Derrick, Henrik Friman, Ralph Doughty, and Linton Wells II, 87-102,

(Washington, DC: Center for Technology & National Security Policy, 2009), available at <www.ndu.edu/CTNSP/docUploaded/International%20Transformation.pdf>.

- Linton Wells II, Walker Hardy, Vinay Gupta, and Daniel Noon, *STAR-TIDES and Starfish Networks: Supporting Stressed Populations with Distributed Talent*, Defense Horizons 70 (Washington, DC: Center for Technology and National Security Policy, December 2009), available at <www.ndu.edu/CTNSP/docUploaded/DH%2070.pdf>.

- Linton Wells II, Terry Pudas, and Bryce McNitt, "Linking NATO Capacity to Local Stakeholders," in *Capability Development in Support of Comprehensive Approaches: Transforming International Civil-Military Interactions*, ed. Derrick J. Neal and Linton Wells II., 203-228 (Washington, DC: Center for Technology and National Security Policy, December 2011), available at <www.ndu.edu/CTNSP/docUploaded/ITX2_Capability%20Development%20for%20CA.pdf>.

- Linton Wells II and Ralph Welborn, *From Haiti to Helmand: Using Open Source Information to Enhance Situational Awareness and Operational Effectiveness*, STAR-TIDES report, December 2010, available at <http://star-tides.net/node/2046>.

- *DOD Open Government Plan Version 2.0*, (Washington, DC: Department of Defense, April 9, 2012), available at <http://open.defense.gov/portals/23/Documents/DOD-Open-Gov-Plan-v2-0.pdf>.

Booz Allen Hamilton Reports

- Booz Allen Hamilton, *STAR-TIDES: Sugar CRM Implementation Plan*, PowerPoint, February 18, 2009.
- Booz Allen Hamilton, *STAR-TIDES Contact Management System and Business Processes*, PowerPoint, January 25, 2010.
- Booz Allen Hamilton, *STAR-TIDES: Stakeholder Survey Analysis (Preliminary)*, PowerPoint, February 22, 2010.
- Booz Allen Hamilton, *STAR-TIDES: Data Collection Methodology*, PowerPoint, November 20, 2009.
- Booz Allen Hamilton, *NDU/CTNSP-TIDES: Stakeholder Identification Research*, PowerPoint, August 25, 2010.
- Booz Allen Hamilton, *CTNSP-TIDES: Planning for New Staff*, PowerPoint, August, 25, 2010.
- Booz Allen Hamilton, *CTNSP/STAR-TIDES: Developing Metrics for Complex, Adaptive Missions*, PowerPoint, August 22, 2011.
- Booz Allen Hamilton, *STAR-TIDES Website Review: Recommendations Report*, PowerPoint, January 2010.
- Booz Allen Hamilton, *STAR-TIDES: Stakeholder Questionnaire Modules*, PowerPoint, December 2, 2009.

Electronic Documents

- Center for Technology and National Security Policy, *STAR-TIDES: Sharing to Accelerate Research, Transformative Innovation for Development and Emergency Support*, retrieved July 13, 2012, available at <http://star-tides.net/>.
- TIDES Newsletters, available at <http://archive.constantcontact.com/fs054/1102524771373/archive/1103464000076.htm>
- Center for Technology and National Security Policy, *TIDES Newsletter* 4, 2009.
- Center for Technology and National Security Policy, *TIDES New Year's Newsletter*, January 2010.
- Center for Technology and National Security Policy, *TIDES January Newsletter*, January 2010.
- Center for Technology and National Security Policy, *TIDES March Newsletter*, March 2010.
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- Center for Technology and National Security Policy, *Reminder: Tides Fall Demo*, September 2011.
- Center for Technology and National Security Policy, *TIDES November Newsletter*, November 2011.
- Center for Technology and National Security Policy, *TIDES December Newsletter*, December 2011.

- Center for Technology and National Security Policy, *TIDES January Newsletter*, January 2012.
- Center for Technology and National Security Policy, *TIDES March Newsletter*, March 2012.
- Center for Technology and National Security Policy, *TIDES April Newsletter*, April 2012.
- Center for Technology and National Security Policy, *TIDES May Newsletter*, May 2012.
- Center for Technology and National Security Policy, *TIDES June Newsletter*, June 2012.

VI. Appendix B: Interview Questions

1. How did you become familiar with STAR-TIDES, what's your relationship?
2. What does STAR-TIDES stand for (individual letters)?
3. What is the difference between TIDES and STAR-TIDES?
4. What is the work of STAR-TIDES? What does it produce?
5. How does STAR-TIDES get its resources?
6. How is STAR-TIDES organized? What is the structure?
7. Would there be any benefits to having an outside board of governors? If yes, what would they be?
8. What policies and rules does STAR-TIDES have?
9. How does STAR-TIDES measure success as an organization?
10. How are STAR-TIDES staff selected?
11. How does STAR-TIDES develop its people?
12. What competencies or skills does one need to work well in STAR-TIDES?
13. What special training do the staff get? Is more training needed?
14. What's the leadership style of top management?
15. How are decisions made?
16. Why does STAR-TIDES exist? What's the vision?
17. What kinds of issues get the most attention from top management?
18. What are the strengths of STAR-TIDES?
19. What are the weaknesses of STAR-TIDES?
20. What could be done to improve STAR-TIDES?